No. 200600109

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Advanta Seeds B.V.

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE FOREGOING PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. IN THE UNITED STATES SEED OF THIS VARIETY (1) SHALL BE LABELED BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBERING AND TAGGING REGULATIONS SPECIFIED BY THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

FESCUE, CHEWINGS

'Culumbra II'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this twenty-fifth day of January, in the year two thousand and seven.

Attest:

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Secretary of Agriculture

REPRODUCE LOCALLY. *Include form number and date on all reproductions* — Form Approved - OMB No. 0581-0055

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE
(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF OWNER
Advanta Seeds B.V.

2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME
ACF174

3. VARIETY NAME
Columbra II

4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)*
Dijkwelsestraat 70
NL - 4421 AJ Kapelle
The Netherlands

5. TELEPHONE *(include area code)*
+31 113 347 900

6. FAX *(include area code)*
+31 113 ~~347 900~~ 552237 (BT:9/8/06)

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PVPO NUMBER
200600109

FILING DATE
2/15/2006

7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION *(corporation, partnership, association, etc.)*
Incorporated

8. IF INCORPORATED, GIVE STATE OF INCORPORATION
The Netherlands

9. DATE OF INCORPORATION

10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. *(First person listed will receive all papers)*
Kenneth Hignight
33725 Columbus ST S.E.
Albany, Oregon
97322
USA

FEES RECEIVED
FILING AND EXAMINATION FEES:
$ 4,382.00
DATE 2/15/2006
CERTIFICATION FEE:
$ 768.00
DATE 11/7/2006

11. TELEPHONE *(Include area code)*
(541) 967-8923

12. FAX *(Include area code)*
(541) 967-8223

13. E-MAIL
kenneth.hignight@advantaseeds.com

14. CROP KIND *(Common Name)*
Chewings fescue

16. FAMILY NAME *(Botanical)*
Poaceae

15. GENUS AND SPECIES NAME OF CROP
Festuca rubra commutata

17. IS THE VARIETY A FIRST GENERATION HYBRID?
☐ YES ☑ NO

18. DOES THE VARIETY CONTAIN ANY TRANSGENES? *(OPTIONAL)*
☐ YES ☒ NO (BT:9/6/2006)
IF SO, PLEASE GIVE THE ASSIGNED USDA-APHIS REFERENCE NUMBER FOR THE APPROVED PETITION TO DEREGULATE THE GENETICALLY MODIFIED PLANT FOR COMMERICALIZATION. _____

19. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED
(Follow instructions on reverse)
a. ☑ Exhibit A. Origin and Breeding History of the Variety
b. ☑ Exhibit B. Statement of Distinctness
c. ☑ Exhibit C. Objective Description of Variety
d. ☑ Exhibit D. Additional Description of the Variety *(Optional)*
e. ☑ Exhibit E. Statement of the Basis of the Owner's Ownership
f. ☑ Voucher Sample (~~2,500~~ 3000 viable untreated seeds or, *for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository)*
g. ☑ Filing and Examination Fee ($~~4,382~~ 4382), made payable to "Treasurer of the United States" *(Mail to the Plant Variety Protection Office)*
(BT:9/6/2006)

20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? *(See Section 83(a) of the Plant Variety Protection Act)*
☑ YES *(If "yes", answer items 21 and 22 below)* ☐ NO *(If "no", go to item 23)*

21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES?
☑ YES ☐ NO
IF YES, WHICH CLASSES? ☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED

22. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?
☑ YES ☐ NO
IF YES, SPECIFY THE NUMBER 1,2,3, etc. FOR EACH CLASS.
☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED
(If additional explanation is necessary, please use the space indicated on the reverse.)

23. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES?
☐ YES ☑ NO
IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. *(Please use space indicated on reverse.)*

24. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT *(PLANT BREEDER'S RIGHT OR PATENT)*?
☐ YES ☑ NO
IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. *(Please use space indicated on reverse.)*

25. The owners declare that a viable sample of basic seed of the variety has been furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.

The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Owner(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF OWNER		SIGNATURE OF OWNER	
Kenneth Hignight			
NAME *(Please print or type)*		NAME *(Please print or type)*	
Kenneth Hignight			
CAPACITY OR TITLE	DATE	CAPACITY OR TITLE	DATE
Director of Research	9-7-06	Director of Research	

(See reverse for instructions and information collection burden statement)

ST-470 (04-03) designed by the Plant Variety Protection Office using Word 2002.

Exhibit A:

Origin and Breeding History
Columbra II (ACF174) Chewings Fescue

1. Columbra II Chewings fescue (*Festuca rubra* L. subsp. *commutata* Guad.) is an advanced generation synthetic cultivar selected from 9 clones. Columbra II was developed for improved seed yield and turf performance, dark bright green color, and freedom from disease.

The germplasm used in the development of Columbra II Chewings fescue was developed using a germplasm and population program initiated at the New Jersey Agricultural Experiment Station in 1962. The most promising plants used in this program were selected from old lawn-type turfs on the grounds of Fort Mc Henry, Baltimore, MD, Johnson Park in Piscataway, NJ, the College Avenue Campus of Rutgers University, New Brunswick, NJ, the Bridgehampton Golf Course, Bridgehampton, NY, Longefellow Park, Cambridge, MA, Westview Cemetery, Atlanta, GA, old parks in Philadelphia, PA, Tennant Cemetery, Tennant, NJ, and a lawn located at 4 Delaware Drive, East Brunswick, NJ.

An intensive germplasm collection effort was initiated by Rutgers University in 1962 to select and utilize the best plants surviving in old turfs. Many weeks were spent examining old turfs for attractive, well-adapted plants of Chewings fescue and other useful turfgrasses. Promising plants selected from old turfs were subjected to clonal and progeny evaluation in closely mowed turf trials and spaced-plant nurseries. Of over a thousand Chewings fescue plants collected, only a few dozen were saved for further breeding work. These elite selections were crossed with other promising selections from the germplasm collection program or from current cycles of the breeding program. Progenies from these crosses were included in population improvement programs, which included screening in a greenhouse for improved disease resistance, in space-plant nurseries for increased seed yield and uniformity, and in closely mowed turf trials for improved turf performance and increased stress tolerance. Extensive screening for improved disease resistance was conducted under greenhouse conditions as well as in spaced-plant nurseries and closely mowed turf trials at North Brunswick, and Adelphia, NJ.

In the summer of 1998 fourteen breeding lines from Rutgers University were sent to Advanta Seeds Pacific. The 14 lines were established in a single spaced plant nursery with 500 plants per line. The plants were evaluated for genetic color, crown density, seed yield potential, and freedom from disease.

In the fall of 1999 nine clones were selected from the single spaced plant nursery and designated ACF174. The nine clones were moved to an isolated crossing block and the seed was harvested in the summer of 2000. ACF174 was then planted in a turf trial located near Salem, New Jersey.

Based on favorable turf performance an increase block of ACF174 was established in the fall of 2001. The increase block containing 1,483 plants, was established in Albany, Oregon. In 2002 negative mass selection was used and 0.92 % of the plants were rogued from the population. The remaining plants were harvested in bulk and the seed was used to establish a morphological nursery for Plant Variety Protection (PVP) measurements.

2. Breeder Seed Maintenance:

A breeder seed multiplication was planted in isolation in 2001 in Albany, Oregon. Seed was harvested in bulk in 2002 and is maintained in cold storage. Seed propagation is limited to three generations, one each of foundation, registered, and certified.

3. Stability and Uniformity:

Columbra II has been a stable uniform cultivar over 2 generations. No off-type or variant plants have been observed during the multiplication or reproduction. During the breeder seed multiplication 0.92 % of the plants were removed. These types were not observed during the subsequent generations. Turf plots of Columbra II have been uniform.

Exhibit A (addendum): Statement of Stability and Uniformity for Culumbra II Chewings Fescue

Culumbra II has been a stable uniform cultivar over two generations. No off-type or variant plants have been observed during the multiplication or reproduction. During the breeder seed multiplication 0.92% of the plants were removed to improve the uniformity of the population. The plants that were removed showed less vigor and had poor plant health. It is not known if the lack of vigor was due to environmental factors, genetic factors, or an environment by genetic interaction. These types were not observed during the subsequent generations. Turf plots of Culumbra II have been uniform and stable.

Exhibit B:

Novelty Statement of Culumbra II Chewings Fescue

The following summary outlines the distinctive characteristics of Culumbra II. The novelty of Culumbra II is based on the unique combination of these characteristics. Culumbra II is most similar to Banner, but may be differentiated by using the following criteria:

1) Culumbra II exhibits a darker genetic color compared to Banner (tables 1A, 1B).

2) The mature plant height of Culumbra II is shorter than Banner (tables 1A, 1B).

3) The morphological characteristics of flag leaf length, height, sheath length, and internode length are shorter for Culumbra II compared to Banner (tables 1A, 1B).

4) Culumbra II has shorter leaf blade characteristics length, height, and sheath length than Banner (tables 1A, 1B).

5) Culumbra II has a longer awn length than Banner (tables 2A, 2B).

6) Culumbra II produces a higher frequency of plants with an oblong shaped panicle compared to Banner (tables 3A, 3B).

7) Culumbra II exhibits more plants with an erect growth habit compared to Banner (tables 5A, 5B).

8) Culumbra II has a higher seed weight than Banner (tables 4A, 4B).

FORM APPROVED: OMB NO. 0581-0055

EXHIBIT C
(Fine Leaved Fescues)

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURE MARKETING SERVICE
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MARYLAND 20705

OBJECTIVE DESCRIPTION OF VARIETY
FINE LEAVED FESCUES
(Festuca spp.)

NAME OF APPLICANT(S)	TEMPORARY DESIGNATION	VARIETY NAME.
Advanta Seeds B.V.	ACF174	Culumbra II

ADDRESS *(Street and No. or R.F.D. No., City, State, Zip Code)*
Djikwelsestraat 70
NL - 4421 AJ Kapelle
The Netherlands

FOR OFFICIAL USE ONLY
PVPO NUMBER
200600109

Place the appropriate number that describes the varietal character of this variety in the boxes below. Use leading zeroes when necessary: (e.g., 0 8 or 0 9). Characteristics described including numerical measurements, should represent those that are typical for the variety. Measured data should be for SPACED PLANTS. Royal Horticulture Society or any recognized color fan may be used to determine plant colors; designate system used: _____
Describe location of test area, conditions and number of plants used: **See section 16, page 4.**

1. SPECIES: (With comparison varieties for use below - use varieties within species of application variety)

14	1 = *F. rubra ssp. commutata* (Chewings)	11 = Cascade 14 = Banner	12 = Highlight 15 = Barfalla	13 = Jamestown
____	2 = *F. rubra ssp. litoralis* (Creeping Red)	21 = Dawson 24 = Pennlawn	22 = Starlight	23 = Merlin
____	3 = *F. rubra ssp rubra* (Spreading Red)	31 = Boreal 34 = Ensylva		
____	4 = *F. ovina* (Sheep)	41 = Covar		
____	5 = *F. longifolia* (Hard)	51 = Durar	52 = Biljart (C-26)	53 = Scaldis
____	6 = *F. tenuifolia* (Fine-Leaved Sheep)	61 = Panda	62 = Barok	
____	7 = Other *(Specify)* F._____			

2. CYTOLOGY:
4 2 Chromosome Number 3 Ploidy 1 = diploid 2 = tetraploid 3 = hexaploid 4 = octoploid

3. ADAPTATION: (0 = Not Tested; 1 = Not Adapted; 2 = Adapted)
2 Northeast 0 Southeast 0 North Central 2 Pacific N.W. ____ Other *(Specify)* _____

4. MATURITY: Date First Headed (panicle emergence) Location(s) of Trial(s) _____
4 Maturity Class:
1 = Very Early (Covar) 2 = Early (Highlight) 3 = Medium Early (Boreal, Dawson)
4 = Medium Late (Cascade, Ruby) 5 = Late (Jamestown, Agram) 6 = Very Late

Date Headed 36. 00 days after March 1,

	Days earlier than	
	Maturity same as 14	Comparison Variety
	Days later than	

5. Plant Height: (At maturity; to top of panicle; Average of 10 culms)

609.90 mm height		
123.03	mm shorter than 14	Comparison Variety
	Height same as	
	mm taller than	

6. GROWTH HABIT: (Mature)
1 1 = Erect (Ruby) 2 = Semi-erect (Highlight) 3 = Prostrate (Silvana)

7. RHIZOMES:
mm Length mm Width mm Internode length
1 1 = Absent (Highlight) 2 = Weakly Creeping (Dawson) 3 = Strongly Creeping (Boreal)
4 = Very Strongly Creeping (Fortress)

20060010?

8. LEAF BLADE:

7 Color: 1 = Light Green (Strarlight) 2 = Medium Light Green (Highlight) 3 = Medium Dark Green (Ruby, Agram) 4 = Dark Green (Jamestown, Manoir) 5 = Bluegreen (Saphir) 6 = Graygreen (Scaldis) 7 = Other (*Specify*) Darker than Jamestown

1 Glaucosity (Sowing Year): 1 = Absent (Koket) 2 = Present (Vendrome)

1 Anthocyanin: 1 = Absent 2 = Present

2 Hairs (Basal) 1 = Absent 2 = Present

1 Margins: 1 = Smooth (54%) 2 = Semi-rough (46%) 3 = Rough

1 Margin folding (closure): 1 = Rolled inward (closed-Highlight) 2 = Flat (open-Jamestown, Engina)

2 Width class: 1 = Very Fine (Agram, Frida) 2 = Fine (Jamestown, Highlight, Banner, Dawson) 3 = Medium Fine (Fortress, Ruby, Scaldis) 4 = Medium Coarse (Engina)

311.35 mm Length (flag leaf)

48.98 mm Shorter than 14

Blade length same as . . . . . |

| mm Longer than . . . . . | Comparison Variety

2.25 mm Width (flag leaf)

▲ | mm Narrower than . . . . . |

Blade width same as 14

▲ | mm Wider than . . . . . | Comparison Variety

9. LEAF SHEATH:

1 Anthocyanin (seedling): 1 = Absent (Highlight) 2 = Present (Jamestown, Fortress, Marga)

1 Auricle Hairiness: 1 = Absent 2 = Present

1 Margins: 1 = Open (Highlight) 2 = Closed (Jamestown)

10. PANICLE (Mature plant):

3 Shape: 1 = Narrow-tapering 2 = Ovate 3 = Oblong 4 = Other (*Specify*) _____

1 Type: 1 = Open 2 = Intermediate 3 = Compact

1 Orientation: 1 = Erect 2 = Nodding

2 Branch Pubescence: 1 = Glabrous 2 = Pubescent

4 Anther Color:

2 Glume Color (At 50% flowering):

1 = Yellowish Green 2 = Green 3 = Bluish Green 4 = Purplish 5 = Reddish 6 = Other (*Specify*) _____

512.90 mm Length

| mm Shorter than . . . . . |

Panicle length same as 14

| mm Longer than . . . . . | Comparison Variety

11. PALEA:

2 Hairs (On keels or margins): 1 = Absent (Banner) 2 = (Agram, Scaldis, Olds) Short 3 = Long (Ranier, Fortress, Jamestown) (BT: 6/5/2006)

12. LEMMA (Mature):

3 Hairs: 1 = Absent (Jamestown) 2 = Several 3 = Many (Highlight)

5.20 mm Lemma Length

	mm Shorter than	
	Lemma length same as	14
	mm Longer than	

} Comparison Variety

0.95 mm Lemma Width

	mm Narrower than	
	Lemma width same as	14
	mm Wider than	

} Comparison Variety

2 Awns: 1 = Absent 2 = Present

1.93 mm Awn Length

	mm Shorter than	
	Awn length same as	
0.18	mm Longer than	14

} Comparison Variety

13. SEED (With lemma & palea):

4 Size Class (g/1000 seed):
1 = <.9g (Biljart, Dawson) 2 = .91-< 1.1g (Jamestown, Highlight)
3 = 1.1 - 1.3 g (Fortress, Novorubra) 4 = > 1.3g (Boreal, Golfrood)

1,419.00 mg per 1000 seed

	mg per 1000 seed less than	
	Seed Weight same as	
397.00	mg per 1000 more than	14

} Comparison Variety

14. DISEASE, INSECT, AND NEMATODE REACTION (0 = Not Tested, 1 = Susceptible, 2 = Resistant):

0	Melting-out *Drechslera poae* (*Helminthosporium vagans*)	0	Stripe rust *P. striiformis*
0	Leaf spot *D. siccans*	0	Leaf rust *P. poae-nemoralis*
0	Net blotch *D.* dictyoides	0	*P. crandalli*
0	Leaf spot *Bipolaris sorkiniana*	0	Pythium Blight *Pythium ultimum*
0	Brown patch *Rhizoctonia solani*	0	Red thread *Corticum fusciforme*
0	Powdery Mildew *Erysiphe graminis*	0	Dollar spot *Sclerotinia homoeocarpa*
0	Stripe smut *Ustilago striiformis*	0	Insect _____
0	F. Patch, Pink snow-mold *Fusarium nivale*	0	Nematode _____
0	Fusarium blight *F. tricinctum, F. roseum*	0	Other _____
0	Gray snow mold *Typhula iotana*	0	Other _____
0	Stem rust *Puccinia graminis*	0	Other _____

15. GIVE VARIETY OR VARIETIES THAT MOST CLOSELY RESEMBLE THE APPLICATION VARIETY. For the following characteristics indicate Degree of Resemblance by placing the column marked, D. R., 1 of the following numbers:

1 = Application variety is less than comparison variety. 2 = Same As
3 = More than, better, greater, darker, more disease resistant, etc.

CHARACTER	VARIETY	D. R.	CHARACTER	VARIETY	D.R.
Rhizome Length	Banner	2	Growth Habit	Banner	3
Leaf Width	Banner	2	Leaf Color	Banner	3
Panicle Color	Banner	2	Panicle Shape	Banner	3
Winter Color	Banner	2	Cold Injury	Banner	2
Shade Tolerance	Banner	2	Heat	Banner	2
Drought	Banner	2	Disease*	Banner	2

* *Specify each disease evaluated.*

16. ADDITIONAL DESCRIPTION: (Use additional sheets as required)
Describe all characteristics that cannot be adequately described in the form above in Exhibit D. Comparative varieties should be used as may be appropriate, such as for disease. Append all comparative trial and evaluation data, including measured characters, environmental, and disease test.

A morphological nursery designated 03PVPFRC was established in September 2003, in Albany, Oregon. Experimental design consisted of 5 entries; 4 replications per entry; 20 plants per replication; for a total of 80 plants per entry. Banner, Jamestown, and Shadow were used as standards. Plants were established on 2.5 foot centers with a skip row between replications and between entries.

The nursery received 30 pounds of nitrogen per acre rate following establishment and 50 pounds of nitrogen per acre per year in 2004 and 2005. The fertilizer source was 15 - 15 - 15 and was applied as a split application with ½ applied in the spring and ½ in the autumn. The nursery was sprayed twice each spring, 3 weeks between applications, with Quilt (2oz/acre rate), to prevent stem rust. One pound of Karmex per acre rate was applied during the late summer to prevent emergence of volunteer seedlings.

Data was analyzed using analysis of variance for a randomized complete block design. Means were calculated for each replication and then analyzed for tables 1A, 1B, 2A, and 2B.

Tables 3A, 3B, 4A, 4B, 5A, and 5B data were analyzed using binary data confidence intervals. The confidence intervals are given for the characteristics which expressed significant differences.

Exhibit D:

Additional Description

Columbra II Chewings Fescue

Columbra II has improved characteristics over current cultivars, such as Banner, Jamestown, and Shadow. Columbra II has a later heading and anthesis date compared to ACF188 and Shadow, but is earlier than Jamestown (tables 1A, 1B). Columbra II has a darker genetic color compared to Jamestown, Shadow, and Banner (tables 1A, 1B). The mature plant height of Columbra II is shorter than Jamestown, Shadow, and Banner (tables 1A, 1B). Columbra II exhibits a reduced flag leaf length compared to Jamestown and Banner, but is greater than ACF188 (tables 1A, 1B). Columbra II has a shorter flag leaf height compared to Jamestown, Shadow, and Banner (tables 1A, 1B). The flag leaf sheath length of Columbra II is longer than ACF188, but shorter than Jamestown, Shadow, and Banner (tables 1A, 1B). Also, Columbra II has reduced flag leaf internode length compared to Jamestown, Shadow, and Banner (tables 1A, 1B). The leaf blade characteristics length and sheath length of Columbra II is greater than ACF188, but shorter than Jamestown, Shadow, and Banner (tables 1A, 1B). The length of the lemma, glume, and the length of the awn are greater for Columbra II compared to ACF188 (tables 2A, 2B). Columbra II has a longer awn length than Jamestown, Shadow, and Banner (tables 2A, 2B). Columbra II differs from ACF188 in the whorl characteristics; length of longest branch of the lower most whorl, distance between lower most whorls and the length of the panicle from the lower most whorl to panicle tip (tables 2A, 2B, illus. 1).

Columbra II may be differentiated on several visual characteristics. Columbra II exhibits more plants with an erect growth habit at anthesis compared to Shadow, Jamestown, and Banner (tables 5A, 5B). Columbra II has a lower frequency of plants with red pigmentation in the panicle compared to Jamestown, but more than ACF188 (tables 3A, 3B). The presence of purple pigmentation in the glume is greater for Columbra II compared to ACF188 (tables 3A, 3B). Columbra II produces more plants with an oblong panicle shape compred to Shadow and Banner (tables 3A, 3B). Columbra II produce fewer plants with a dark pigmentation of the nodes compared to Jamestown (tables 4A, 4B). Columbra II has a higher seed weight per 1,000 compared to Jamestown, Shadow, and Banner (tables 4A, 4B).

Table 1A 2004 Morphological Data

Cultivar	Heading Date days after March 1	Anthesis Date days after March 1	Genetic Color	Mature Plant Height (mm)	Plant Width (mm)	Panicle Length (mm)	Flag Leaf Length (mm)	Flag Leaf Width (mm)	Flag Leaf Height (mm)	Flag Leaf Sheath Length (mm)	Flag Leaf Internode Length (mm)	Leaf Blade Length (mm)	Leaf Blade Width (mm)	Leaf Blade Height (mm)	Leaf Sheath Length (mm)
Culumbra II	42.00	47.00	6.80	609.90	206.53	512.90	244.83	2.75	255.95	143.20	83.10	185.33	3.00	105.65	88.98
ACF188	34.25	42.00	6.80	658.33	204.48	530.95	230.20	2.50	270.78	133.43	104.65	170.23	2.50	105.90	80.95
Jamestown	53.50	52.75	5.15	656.40	199.78	491.40	271.40	2.50	330.33	169.78	121.53	207.65	2.50	140.60	103.75
Shadow	37.75	43.00	5.00	739.78	211.50	587.33	276.03	2.75	319.03	164.68	118.73	205.65	3.00	122.18	97.83
Banner	42.00	46.00	5.30	732.93	199.25	566.23	301.58	2.50	345.35	178.03	132.58	236.03	2.50	137.78	109.10
LSD 5%	3.32	1.31	0.24	22.74	21.17	20.22	9.89	0.47	28.63	7.46	8.39	10.19	0.51	19.81	3.82
C.V.	6.30	2.26	3.31	2.66	8.22	2.98	2.96	14.48	7.47	3.75	5.94	4.02	15.12	12.84	3.16

Cultivar under evaluation
Significant difference over two years one location.
Significant difference over one year one location.
Measurements taken in Albany, Oregon
4 reps; 20 plants/rep = 80 data points

Table 1B 2005 Morphological Data

Cultivar	Heading Date days after March 1	Anthesis Date days after March 1	Genetic Color	Mature Plant Height (mm)	Plant Width (mm)	Panicle Length (mm)	Flag Leaf Length (mm)	Flag Leaf Width (mm)	Flag Leaf Height (mm)	Flag Leaf Sheath Length (mm)	Flag Leaf Internode Length (mm)	Leaf Blade Length (mm)	Leaf Blade Width (mm)	Leaf Blade Height (mm)	Leaf Sheath Length (mm)
Culumbra II	36.00	52.25	5.93	824.23	266.63	675.83	311.35	2.25	337.53	173.43	133.53	232.08	2.25	136.53	113.83
ACF188	28.75	49.75	5.63	795.10	258.75	626.18	278.65	2.25	326.23	154.48	143.23	212.53	2.75	125.90	95.65
Jamestown	47.50	55.50	4.60	924.10	252.13	682.78	330.58	2.25	423.78	196.68	184.65	255.78	2.75	176.00	125.78
Shadow	28.25	50.00	4.55	929.33	265.13	710.73	325.25	2.50	394.73	192.25	168.85	250.53	2.50	169.90	120.90
Banner	38.75	53.50	4.93	939.05	265.13	705.10	360.33	3.00	445.60	210.28	190.15	267.60	2.75	193.20	134.13
LSD 5%	2.58	1.21	0.41	36.65	13.20	43.26	17.85	0.60	15.65	9.46	12.55	16.78	0.65	10.75	6.01
C.V.	5.71	1.84	6.30	3.30	4.00	5.05	4.41	19.36	3.22	4.05	6.07	5.46	19.86	5.32	4.04

Cultivar under evaluation
Significant difference over two years one location.
Significant difference over one year one location.
Measurements taken in Albany, Oregon
4 reps; 20 plants/rep = 80 data points

Table 2A 2004 Laboratory Morphological Data

Cultivar	Lemma Length (mm)	Lemma Width (mm)	Lemma Awn Length (mm)	Glume Length (mm)	Florets per Spikelet	Spikelet Length (mm)	Length of Longest Branch Lowermost Whorl (mm)	Distance Between Lower Most Whorls (mm)	Number of Spikelets on the Longest Whorl	Spikelets per Panicle	Length of Panicle from Lower Most Whorl to Tip (mm)
Columbra II	5.20	0.95	1.93	4.78	6.25	11.10	72.33	39.75	9.75	47.25	129.95
ACF188	4.88	0.95	1.48	4.18	6.50	10.05	63.98	36.83	10.00	49.50	118.80
Jamestown	4.90	0.88	1.68	4.53	5.50	9.65	68.93	40.35	10.75	55.75	137.10
Shadow	5.50	0.93	1.75	4.55	6.00	11.68	76.85	44.28	8.25	41.75	142.48
Banner	5.03	0.90	1.75	4.60	5.75	10.25	75.73	43.93	12.25	56.50	144.55
LSD 5%	0.19	0.05	0.10	0.19	0.55	0.69	5.84	1.64	1.45	5.74	7.71
C.V.	2.88	3.84	4.79	3.35	7.30	5.20	6.47	3.16	11.25	9.09	4.55

■ Cultivar under evaluation
■ Significant difference over two years one location.
■ Significant difference over one year one location.
Measurements taken in Albany, Oregon
4 reps; 20 plants/rep = 80 data points

Table 2B 2005 Laboratory Morphological Data

Cultivar	Lemma Length (mm)	Lemma Width (mm)	Lemma Awn Length (mm)	Glume Length (mm)	Florets per Spikelet	Spikelet Length (mm)	Length of Longest Branch Lowermost Whorl (mm)	Distance Between Lower Most Whorls (mm)	Number of Spikelets on the Longest Whorl	Spikelets per Panicle	Length of Panicle from Lower Most Whorl to Tip (mm)
Columbra II	5.50	0.98	2.68	4.95	5.00	9.78	80.03	44.25	11.00	53.50	148.23
ACF188	5.05	0.98	1.90	4.50	5.50	9.23	63.75	38.78	11.00	55.25	129.18
Jamestown	5.25	0.93	2.35	4.88	5.75	9.93	85.90	47.58	13.50	66.75	160.48
Shadow	5.98	1.03	2.43	5.10	5.50	11.75	86.03	49.18	9.75	48.50	163.48
Banner	5.30	0.90	2.35	4.83	5.00	9.68	79.85	47.15	12.75	63.50	157.98
LSD 5%	0.26	0.05	0.11	0.25	0.54	0.85	7.54	2.46	1.24	4.85	7.60
C.V.	3.81	4.46	3.72	4.05	8.00	6.73	7.56	4.31	8.51	6.69	3.97

■ Cultivar under evaluation
■ Significant difference over two years one location.
■ Significant difference over one year one location.
Measurements taken in Albany, Oregon
4 reps; 20 plants/rep = 80 data points

Panicle Type Inflorescence

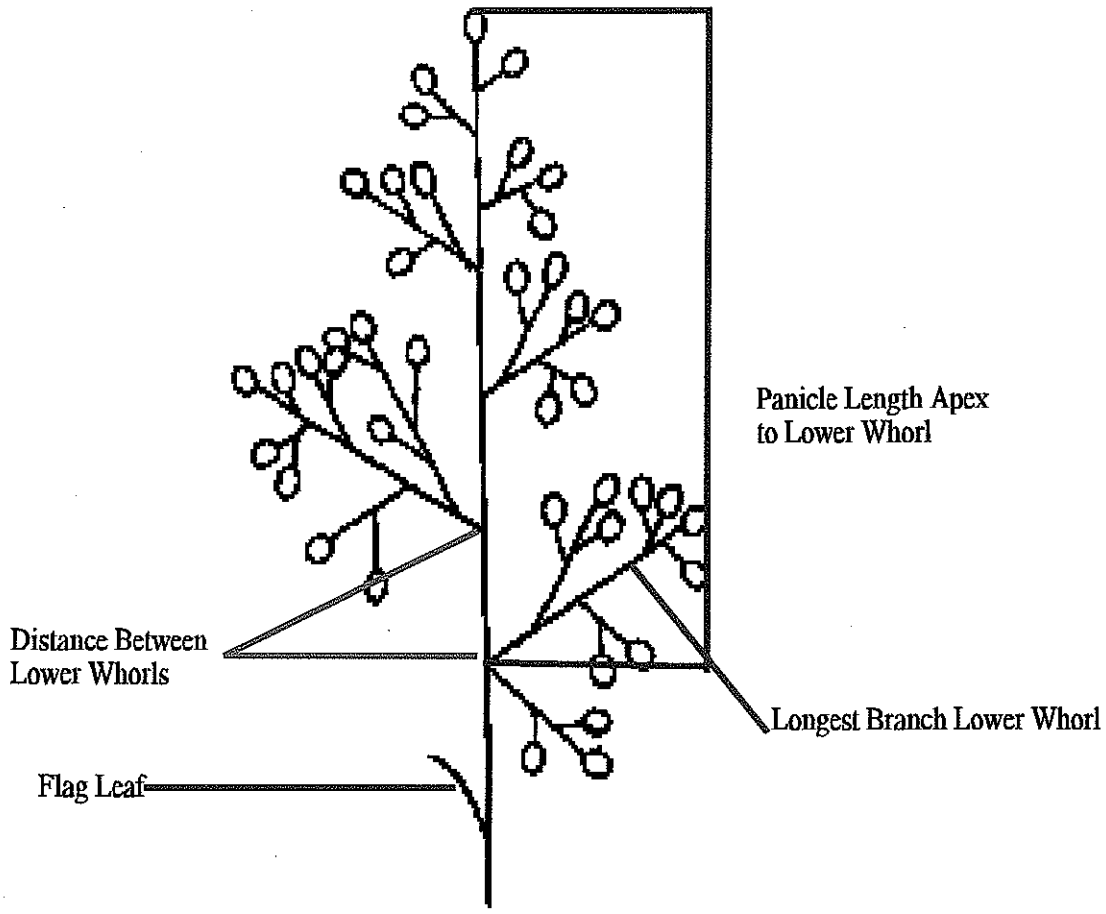

Illustration 1.

Table 3A

2004 Morphological Measurements of the Panicle

Cultivar	Anther Color % Yellow	Anther Color % Purple	Panicle Color Red Pigmentation			Glume Color Purple Pigmentation			Panicle Orientation % Nodding	Panicle Shape % Narrow	Panicle Shape Oblong			Panicle Type Open			Panicle Type % Compact	Percent Branches of Lower Whorl =1	Percent Branches of Lower Whorl =2	Percent Branches of Lower Whorl >3	Panicle Branch Pubescence % Present
			% Present	Lower CI	Upper CI	% Present	Lower CI	Upper CI			% Present	Lower CI	Upper CI	% Present	Lower CI	Upper CI					
Culumbra II	5	95	39	0.283	0.497	34	0.236	0.444	6	32	68	0.578	0.782	68	0.578	0.782	32	15	85	0	100
ACF188	16	84	15	0.072	0.228	12	0.049	0.191	0	55	45	0.341	0.559	45	0.341	0.559	55	13	86	1	99
Jamestown	0	100	63	0.524	0.736	62	0.514	0.726	1	50	50	0.390	0.610	50	0.390	0.610	50	24	76	0	100
Shadow	6	94	46	0.351	0.569	32	0.218	0.422	6	59	41	0.302	0.518	41	0.302	0.518	59	21	70	9	100
Banner	1	99	51	0.400	0.620	49	0.380	0.600	9	59	41	0.302	0.518	41	0.302	0.518	59	23	77	0	95
LSD (0.05)																					

Cultivar under evaluation
Significant difference over two years one location.
Significant difference over one year one location.
Measurements taken in Albany, Oregon
4 reps; 20 plants/rep = 80 data points
CI = Confidence Interval

Table 3B

2005 Morphological Measurements of the Panicle

Cultivar	Anther Color % Yellow	Anther Color % Purple	Panicle Color Red Pigmentation			Glume Color Purple Pigmentation			Panicle Orientation % Nodding	Panicle Shape % Narrow	Panicle Shape Oblong			Panicle Type Open			Panicle Type % Compact	Percent Branches of Lower Whorl =1	Percent Branches of Lower Whorl =2	Percent Branches of Lower Whorl >3	Panicle Branch Pubescence % Present
			% Present	Lower CI	Upper CI	% Present	Lower CI	Upper CI			% Present	Lower CI	Upper CI	% Present	Lower CI	Upper CI					
Culumbra II	6	94	74	0.644	0.836	57	0.462	0.678	20	12	74	0.644	0.836	74	0.644	0.836	12	11	86	3	98
ACF188	9	91	40	0.293	0.507	22	0.129	0.311	24	26	88	0.809	0.951	88	0.809	0.951	26	13	83	4	100
Jamestown	1	99	91	0.847	0.973	64	0.535	0.745	91	21	79	0.701	0.879	79	0.701	0.879	21	10	90	0	100
Shadow	1	99	66	0.556	0.764	47	0.361	0.579	94	51	49	0.380	0.600	49	0.380	0.600	51	13	79	8	100
Banner	4	96	83	0.718	0.912	55	0.441	0.659	85	45	55	0.441	0.659	55	0.441	0.659	45	8	91	1	95
LSD (0.05)																					

Cultivar under evaluation
Significant difference over two years one location.
Significant difference over one year one location.
Measurements taken in Albany, Oregon
4 reps; 20 plants/rep = 80 data points
CI = Confidence Interval

Table 4A 2004 Additional Measurements of the Leaf Blade and Seed

Cultivar	Node Color Distinct			Lemma Hairs % Present	Lemma Hairs % Many	Lemma Hairs % Several	Lemma Awn % Present	Palea Hairs % Present	Leaf Blade Margin Hairs % Present	Leaf Sheath Auricle Hairs % Present	Leaf Sheath Surface Hairs % Glaborous	Leaf Sheath Collar Hairs % Glaborous	Leaf Blade Surface Hairs % Present	Seed Weight mg per 1,000 seeds
	% Present	Lower CI	Upper CI											
Columbra II	69	0.589	0.791	95	0	95	100	100	100	3	12	0	3	1514
ACF188	68	0.578	0.782	100	11	89	100	100	100	0	3	0	0	1570
Jamestown	91	0.847	0.973	100	0	100	100	100	100	3	13	0	6	1028
Shadow	64	0.535	0.745	100	8	92	100	100	100	9	13	3	6	1084
Banner	86	0.784	0.936	97	0	97	100	100	100	13	13	3	0	1019
LSD (0.05%)														

(BT:8/31/2006) (LSD5%)

■ Cultivar under evaluation
■ Significant difference over two years one location.
■ Significant difference over one year one location.
Measurements taken in Albany, Oregon
4 reps; 20 plants/rep = 80 data points
CI = Confidence Interval

Table 4B 2005 Additional Measurements of the Leaf Blade and Seed

Cultivar	Node Color Distinct			Lemma Hairs % Absent	Lemma Hairs % Many	Lemma Hairs % Several	Lemma Awn % Present	Palea Hairs % Present	Leaf Blade Margin Hairs % Present	Leaf Sheath Auricle Hairs % Present	Leaf Sheath Surface Hairs % Glaborous	Leaf Sheath Collar Hairs % Glaborous	Leaf Blade Surface Hairs % Present	Seed Weight mg per 1,000 seeds
	% Present	Lower CI	Upper CI											
Columbra II	40	0.293	0.507	100	0	100	100	100	100	8	16	0	5	1419
ACF188	49	0.380	0.600	100	5	95	100	100	100	5	5	0	0	1302
Jamestown	75	0.655	0.845	100	0	100	100	100	100	3	8	3	3	992
Shadow	56	0.451	0.669	100	10	90	100	100	100	23	23	15	10	1064
Banner	79	0.701	0.879	100	0	100	100	100	100	8	15	5	8	1022
LSD (0.05%)														

(BT:8/31/2006) LSD(5%)

■ Cultivar under evaluation
■ Significant difference over two years one location.
■ Significant difference over one year one location.
Measurements taken in Albany, Oregon
4 reps; 20 plants/rep = 80 data points
CI = Confidence Interval

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Table 5A 2004 Additional Morphological Measurements

Cultivar	Growth Habit Erect			Growth Habit at Anthesis	Growth Habit at Anthesis	Leaf Blade Anthocyanin	Leaf Blade Margin Folding	Leaf Sheath Margins	Rhizomes	Spring Growth Habit	Spring Growth Habit	Spring Growth Habit	Leaf Blade Margin Roughness	Leaf Blade Margin Roughness	Leaf Blade Margin Roughness
	% Present	Lower CI	Upper CI	% Semi-Erect	% Prostrate	% Purple	% Closed	% Open	% Present	% Prostrate	% Semi-Erect	% Erect	% Smooth	% Semi-Rough	% Rough
Columbra II	60	0.701	0.879	40	0	0	100	100	0	0	1	99	48	46	6
ACF188	79	0.493	0.707	19	2	0	100	100	0	0	3	97	54	38	8
Jamestown	4	0.000	0.083	96	0	0	100	100	0	0	99	1	50	42	8
Shadow	27	0.173	0.367	73	0	0	100	100	0	8	92	0	38	59	3
Banner	12	0.049	0.191	78	10	0	100	100	0	0	100	0	53	45	2
LSD (~~0.95~~%)															

(BT: 8/31/2006 LSD (5%))

■ Cultivar under evaluation
▒ Significant difference over two years one location.
▒ Significant difference over one year one location.
Measurements taken in Albany, Oregon
4 reps; 20 plants/rep = 80 data points
CI = Confidence Interval

Table 5B 2005 Additional Morphological Measurements

Cultivar	Growth Habit Erect			Growth Habit at Anthesis	Growth Habit at Anthesis	Leaf Blade Anthocyanin	Leaf Blade Margin Folding	Leaf Sheath Margins	Rhizomes	Spring Growth Habit	Spring Growth Habit	Spring Growth Habit	Leaf Blade Margin Roughness	Leaf Blade Margin Roughness	Leaf Blade Margin Roughness
	% Present	Lower CI	Upper CI	% Semi-Erect	% Prostrate	% Purple	% Closed	% Open	% Present	% Prostrate	% Semi-Erect	% Erect	% Smooth	% Semi-Rough	% Rough
Columbra II	80	0.712	0.888	20	0	0	100	100	0	4	96	0	70	30	0
ACF188	80	0.712	0.888	20	0	0	100	100	0	1	95	4	80	20	0
Jamestown	2	0.000	0.051	98	0	0	100	100	0	0	100	0	62	38	0
Shadow	6	0.008	0.112	94	0	0	100	100	0	0	98	2	75	25	0
Banner	22	0.220	0.311	78	0	0	100	100	0	0	100	0	61	39	0
LSD (~~0.95~~%)															

(BT: 8/31/06 LSD (5%))

■ Cultivar under evaluation
▒ Significant difference over two years one location.
▒ Significant difference over one year one location.
Measurements taken in Albany, Oregon
4 reps; 20 plants/rep = 80 data points
CI = Confidence Interval

2006 0109

16.

REPRODUCE LOCALLY. Include form number and edition date on all reproductions. FORM APPROVED - OMB No. 0581-0055

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

EXHIBIT E
STATEMENT OF THE BASIS OF OWNERSHIP

Application is required in order to determine if a plant variety protection certificate is to be issued (*7 U.S.C. 2421*). The information is held confidential until the certificate is issued (*7 U.S.C. 2426*).

1. NAME OF APPLICANT(S)	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER	3. VARIETY NAME
Advanta Seeds B. V.	ACF174	Culumbra II
4. ADDRESS (*Street and No., or R.F.D. No., City, State, and Zip, and Country*)	**5. TELEPHONE** (*Include area code*)	**6. FAX** (*Include area code*)
Dijkwelsestraat 70 4421 AJ Kapelle the Netherlands	+31 113 347 900	+ 31 113 ~~34 7 900~~ 552237 (ST: 9/8/00)
	7. PVPO NUMBER 200600109	200600109

8. Does the applicant own all rights to the variety? Mark an "X" in the appropriate block. **If no, please explain.**

☒ YES ☐ NO

9. Is the applicant (individual or company) a U.S. national or a U.S. based company? **If no, give name of country.**

the Netherlands ☐ YES ☒ NO

10. Is the applicant the original owner? **If no, please answer one of the following:**

☒ YES ☐ NO

a. If the original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. National(s)?

☐ YES ☐ NO **If no, give name of country**

b. If the original rights to variety were owned by a company(ies), is (are) the original owner(s) a U.S. based company?

☐ YES ☒ NO **If no, give name of country** the Netherlands

11. Additional explanation on ownership *(If needed, use the reverse for extra space)*:

PLEASE NOTE:

Plant variety protection can only be afforded to the owners (not licensees) who meet the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.

2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.

3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed the final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definitions.

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MD 20705

EXHIBIT F
DECLARATION REGARDING DEPOSIT

NAME OF OWNER (S)	ADDRESS *(Street and No. or RD No., City, State, and Zip Code and Country)*	TEMPORARY OR EXPERIMENTAL DESIGNATION
Advanta Seeds B.V.	Dijkwelsestraat 70 NL - 4421 AJ Kapelle The Netherlands	ACF174 **VARIETY NAME** Culumbra II
NAME OF OWNER REPRESENTATIVE (S)	**ADDRESS** *(Street and No. or RD No., City, State, and Zip Code and Country)*	**FOR OFFICIAL USE ONLY**
Kenneth Hignight	~~Dijkwelsestraat 70~~ 33725 Columbus St S.E. ~~NL - 4421 AJ Kapelle~~ Albany, Oregon 97322 ~~The Netherlands~~ (BT: 9/6/2006)	**PVPO NUMBER** 200600109

I do hereby declare that during the life of the certificate a viable sample of propagating material of the subject variety will be deposited, and replenished as needed periodically, in a public repository in the United States in accordance with the regulations established by the Plant Variety Protection Office.

Kenneth Hignight
Signature

1-15-06
Date